

REMARKS

Claims 1-13 were pending. Claims 1-13 have been amended. Therefore, claims 1-13 are presented and at issue.

1. Priority

The Examiner noted that the present application repeats a substantial portion of prior Application No. 08/757,645, filed 2 December 1996, but adds and claims additional disclosure not presented in the prior application. Since the present application names inventors that were named in the prior patent application, the present application constitutes a Continuation-In-Part of the prior application. The status of the present application as a Continuation-In-Part is correctly indicated in the Related Cases paragraph on page 1.

2. Information Disclosure Statement

The Examiner requested copies of non-patent literature cited in the parent case, Patent Application Serial No. 08/757,645, for consideration. The Examiner indicated that these references were not found in the parent file. Accordingly, applicants have prepared a Supplemental Information Disclosure Statement, accompanied by complete copies of all cited references, so as to ensure that all known relevant prior art is considered.

3. Specification

The Examiner objected to the disclosure on the basis of several informalities.

First of all, the Examiner observed that the brief description of Fig. 2A1 actually refers to Figs. 2A1-1 and 2A1-2. This discrepancy resulted because the original Figure could not fit on one standard 8.5-by-11 sheet of paper, while still meeting the drafting requirements for character height. Accordingly, the specification has been amended for consistency with the drawings presently on file.

Similarly, the Examiner observed that the brief description of Fig. 2B3 actually refers to Figs. 2B3-1 and 2B3-2. Appropriate corrections have been made to the specification.

The Examiner conjectured that, although Figs. 2C1 and 2C1' refer to feed delivery

vehicles, they appear to be feedbunk reading vehicles or veterinary vehicles. This is not correct. The vehicles are, indeed, feed delivery vehicles, as described in the specification. Likewise, Figs. 2D1 and 2D2 refer to veterinarian vehicles, as correctly indicated in the specification, and not to feedbunk reading vehicles. Figs. 2E1 and 2E2 refer to nutritionist vehicles, as correctly pointed out in the specification. Notwithstanding the foregoing, the Examiner might have been confused by the fact that the drawing of a cow, which was present in Figs. 2C1, was inadvertently omitted from Figs. 2D1 and 2E1. This is a drafting error which will be corrected by applicants via submission of a new set of formal drawings when the case is allowed.

4. Drawings

The Examiner objected to the drawings for the same reasons noted above in connection with the specification. As stated above, the Examiner's objections are related to a drafting error which will be corrected by applicants via submission of a new set of formal drawings when the case is allowed.

5. Claim Objections

The Examiner objected to claim 9 because the word "infor-mation" should be spelled as "information". The Examiner objected to claim 12 because the word "modeling" should be spelled as "modeling". Appropriate corrections have been made to the claims.

6. Claim Rejections – 35 USC 112

The Examiner rejected claims 1-11 under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As for claim 1, the Examiner observed that the phrase "feedlot vehicle team" is confusing. Inasmuch as it is irrelevant where the feedlot management computer system is installed, the phrase "feedlot vehicle team" was deleted from the claim. The potentially ambiguous phrase "periodically up-dated" in claim 2 was replaced with the more precise phrase "repeatedly updated". In claim 3, the "and/or" construction was eliminated.

The Examiner rejected claim 12 under the second paragraph of 35 USC 112. Lines 2-3 recite "a plurality of vehicles" which are each described as including an entire feedlot computer

network. This is clearly impractical, and the result of a word processing error. The preamble of claim 12 has been amended to set forth an animal feedlot management system that comprises a plurality of feedlot vehicle computer systems. Each computer system is now described as including a communications mechanism for communicating with a feedlot computer network comprised of a feedbunk reading computer system, a means for producing, storing and displaying feed ration delivery data, a feedmill computer system, and a feedlot management computer system. The confusing and redundant phrase “a digital data communications system integrated with said feedlot computer network” has been deleted.

The Examiner stated that the word “subsystem” of lines 9 and 11 is confusing. This term has been replaced with the word “mechanism” where appropriate, to indicate that the function is performed by the feedlot vehicle computer system or a device that is coupled to the feedlot vehicle computer system. Likewise, the Examiner did not understand the phrase “symbolically embedded”. This has been replaced with clearer language to specify a reference coordinate system defined within the feedlot. Finally, the circular definition in lines 6-7 of claim 12 has been deleted.

The Examiner rejected claim 13 under the second paragraph of 35 USC 112. The phrase “a method of feedlot management system for installation...” is confusing and technically inaccurate. Accordingly, the preamble of claim 13 has been redrafted to specify a “computer-implemented method of animal feedlot management, the method comprising the steps of:”. The circular definition in line 6 of the claim has been addressed by the aforementioned modification to the claim preamble, and also by a modification to the offending claim element. This element has been amended to read: “providing a feedlot computer network comprised of a feedbunk reading computer system, a means for producing, storing and displaying feed ration deliver data, a feedmill computer system, and a feedlot management computer system”, to clearly indicate that the feedlot management computer system is, in fact, a part of the network.

In view of the foregoing amendments to the claims, it is submitted that claims 1-13 meet all applicable requirements of 35 USC 112.

7. Claim Rejections – 35 USC 102(e)

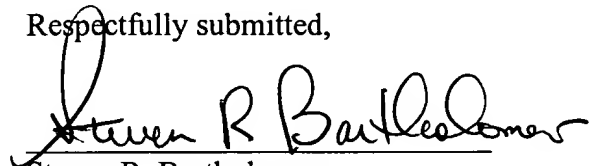
Claims 1-13 were rejected under 35 USC 102(e) as being anticipated by Anderson et al (6,032,084). Note that Anderson and the present patent application are, and always were,

commonly owned. In view of the amendments to the claims, and the common ownership of the present application with respect to the cited reference, the present patent application is not anticipated by Anderson under 35 USC 102.

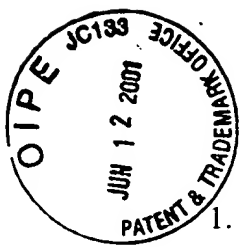
8. Summary

In view of the foregoing amendments to the claims, it is submitted that all pending claims are now in condition for allowance, and such action by the Examiner is earnestly solicited. If, however, the Examiner has any questions or concerns, he is invited to contact the Applicant's attorney at 1-212-551-5002.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Steven R. Bartholomew", is written over a horizontal line.

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1. A computer network for managing operations within a feedlot having a plurality of animal pens each having a feedbunk, said computer network comprising:

a feedbunk reading computer system, associated with a feedbunk reading vehicle transportable to animal pens in said feedlot, said feedbunk reading computer system including mechanisms for receiving, storing and displaying animal health data and feed ration dispensed data;

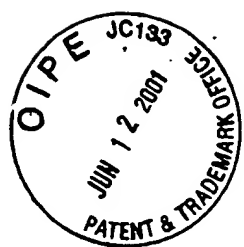
the feedbunk reading computer system further including mechanisms for producing, storing and displaying feed ration delivery data, said feed ration delivery data specifying the assigned amount of feed ration to be delivered to the feedbunks associated with a plurality of animal pens along a feeding route within a predetermined time period, and said feed ration dispensed data indicating the actual amount of feed ration delivered to the feedbunks of said animal pens during the predetermined time period;

a plurality of feed delivery vehicles each being associated with a feed delivery vehicle computer system transportable to each said animal pen in said feedlot and having a storage mechanism for storing an assigned feed load, and a feed metering mechanism for measuring the actual amount of feed ration delivered to the feedbunks associated with said feeding route, and a data generation mechanism for producing said feed ration dispensed data indicative of the actual amount of feed ration delivered to said feedbunks, each said feed delivery vehicle computer system having mechanisms for receiving, storing and displaying said feed ration delivery data provided from said feedbunk reading computer system and a mechanism for receiving said feed ration dispensed data produced from said metering mechanism aboard said feed delivery vehicle;

a feedmill computer system, installed at a feedmill in said feedlot and having mechanisms for receiving, storing and displaying said feed ration delivery data produced from said feedbunk reading computer system;

a feedlot management computer system for receiving, storing and displaying said feed ration delivery data, said feed ration dispensed data and said animal health data, for use by a feedlot manager of said feedlot;

a digital data communications system integrated with said feedlot computer network, for transferring digital data files among said feedbunk reading computer system, said feedmill computer system, said plurality of feed delivery vehicle computer systems, said feedlot management computer system and said feedmill computer system, wherein said digital data files include any of said feed ration delivery data, said animal health data and said feed ration dispensed data; and



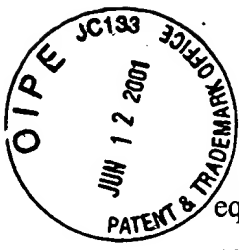
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a database for maintaining information representative of a model of said feedlot and objects contained therein, each said feed delivery computer system including a mechanism for viewing at least a portion of said model maintained in said database, each feed delivery computer system also including a vehicle information acquisition mechanism for acquiring vehicle information regarding (i) the position of said feed delivery vehicle relative to a first prespecified coordinate referenced frame, and/or (ii) the state of operation of said feed delivery vehicle and information to said database to specify in the position and/or the state of operation of said feed delivery vehicle represented within said model of said feedlot.

2. The computer network of claim 1, wherein said vehicle information acquisition mechanism comprises a satellite-based global positioning system, and said database is repeatedly updated using said vehicle information obtained from said satellite-based global positioning system.
3. The computer network of claim 2, further comprising an animal information acquisition mechanism for acquiring animal information regarding at least one of: (a) the position of animals in said feedlot relative to said prespecified coordinate reference frame, and (b) the body-temperature of said animals, such that said feedlot model reflects at least one of the position and body-temperature of said animals.
4. The computer network of claim 1, wherein said feed delivery vehicle computer system is coupled to a stereoscopic display subsystem which permits the driver to stereoscopically view any aspect of said model, including the driver's vehicle as it is being navigated through the feedlot during feedlot operations.
5. The computer network of claim 4, wherein each said feed delivery vehicle is remotely controlled through the feedlot by an operator using a remotely situated workstation.
6. The computer network of claim 5, wherein each said feed delivery vehicle is



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equipped with a stereoscopic vision subsystem having a field of view along the navigational course of said feedlot vehicle.

7. The computer network of claim 6; wherein said database is maintained aboard an Internet server operably associated with an Internet-based digital communications network.

8. The computer network of claim 6, wherein a replica of said database is maintained aboard each said feedlot vehicle computer system.

9. The computer network of claim 3, wherein the feedlot vehicle computer system further comprises a data retrieval mechanism for ascertaining both vehicle and animal information reflected in said model of the feedlot.

10. The computer network of claim 1, which further comprises at least one workstation for viewing said model of said feedlot during feedlot operations.

11. The computer network of claim 1, which further comprises at least one workstation for viewing said model of a feedlot vehicle in said feedlot and remotely navigating said feedlot vehicle along a course in said feedlot.

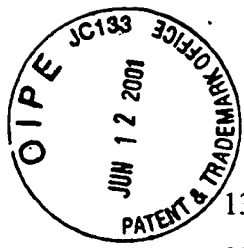
12. An animal feedlot management system, comprising:

a plurality of feedlot vehicle computer systems which each include:

a communications mechanism for communicating with a feedlot computer network comprised of a feedbunk reading computer system, a means for producing, storing and displaying feed ration delivery data, a feedmill computer system, and a feedlot management computer system,

a feedlot modeling mechanism for maintaining a geometrical database containing a geometrical model of the feedlot and objects contained therein a coordinate acquisition mechanism for acquiring coordinate information specifying the position of the feedlot vehicle relative to a reference coordinate system defined within the feedlot, and

a geometrical database processor for processing information in said geometrical database using said coordinate information in order to update said geometrical model.



13. A computer-implemented method of animal feedlot management, the method comprising the steps of:

- (a) providing a feedlot computer network comprised of a feedbunk reading computer system, a means for producing, storing and displaying feed ration deliver data, a feedmill computer system, and a feedlot management computer system,
- (b) providing a feedlot vehicle associated with a portable computer system in communication with said feedlot computer network, said portable computer system using real-time VR modeling and coordinate acquisition techniques in order to maintain a 3-D geometrical model of said feedlot and objects therein including said feedlot vehicle; and
- (c) navigating said feedlot vehicle while viewing at least a portion of said feedlot model from within said feedlot vehicle.

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